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REMARKS

Claims 1-37 are currently pending in the application. Claims 1, 11-13, 15, 18, 19, 24, and 31-37 were rejected. Claims 2-10, 14, 16, 17, 20-23, and 25-30 were objected to.

The Examiner rejected claims 1, 11-13, 15, and 18 under 35 U.S.C. 103(a) as being unpatentable over U.S. Patent Publication No. 2002/0021694 A1 (Benayoun). The Examiner also rejected claims 19, 24, and 31-37 over Benayoun in combination with a variety of other references. The rejections are respectfully traversed.

Benayoun describes a “data transmission system including multiple local area networks (LANs) coupled by a hub that further includes multiple LAN adapters coupled to the LANs, an asynchronous transfer mode (ATM) crossbar switch coupling all the LAN adapters.” See Abstract. The ATM crossbar switch “includes a data switch module 30” and “a scheduler 32.” See paragraph [0016] and FIG. 2. “Data switch module 30 includes a switching data block 40, which is generally implemented as a passive switching matrix... Data switch module 30 also includes a control logic 42, which decodes the configuration signals received from scheduler 32 to determine the data path connection based on the synchronization signal received from clock generator 38.” See paragraph [0017]. And as discussed in paragraphs [0019] and [0020], and as shown in FIG. 3, the transmission of data through data switch module 30 is controlled in accordance with the clock signals generated by clock generator 38, i.e., the DATA-CLK and SYNCHRO signals.

By contrast, claim 1 of the present application recites “an asynchronous crossbar coupled to the plurality of clock domain converters, and *operable in the asynchronous domain* to implement a first-in-first-out (FIFO) channel between any two of the clock domain converters.” Claim 1 further recites that the asynchronous domain is “characterized by transmission of data according to *an asynchronous handshake protocol*.” Emphases added. That is, because it is “*operable in the asynchronous domain*,” the asynchronous crossbar recited in claim 1 transmits

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data "according to an asynchronous handshake protocol." An example of such an asynchronous handshake protocol is described in the present specification beginning at page 9, line 14, which describes the communications between a sending and receiving circuit.

Because its switching circuitry is passive and is controlled by clock signals, Benayoun's ATM crossbar switch does not employ a handshake protocol to transmit data. Therefore Benayoun does not teach the recited asynchronous crossbar which is "operable in the asynchronous domain" which is characterized by "transmission of data according to an asynchronous handshake protocol."

Moreover, claim 1 recites "an integrated circuit" which includes the various claimed elements, i.e., a "system on a chip." This is clearly not the case with Benayoun. That is, as discussed above, Benayoun's architecture is provided for the purpose of interconnecting local area networks (LANs) into a larger network. And as is well known, each of the LANs includes a variety of computing devices, e.g., servers, desktop computers, workstations, etc. One of ordinary skill in the art would not apply the teachings of Benayoun to the design of an integrated circuit in that it is not reasonable to contemplate that each of the LANs (and all of the devices on them) would be included on an integrated circuit as are the synchronous modules recited in claim 1. Thus there is no suggestion to apply the teachings of Benayoun to the architecture of an integrated circuit. Indeed, the context of Benayoun's teachings requires a distributed system of LANs as described.

Any alleged high level similarity between Benayoun's teachings and the idea underlying the claimed invention is not sufficient to obviate the invention recited in claim 1. The Examiner must show that one of ordinary skill in the art would be able to arrive at the present invention based on Benayoun's teaching. However, because there is no straightforward application of Benayoun's teaching which would result in the claimed invention without undue experimentation, and because one of ordinary skill in the art would not be motivated to use

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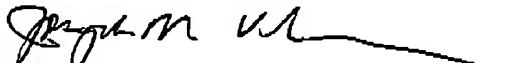
Benayoun as a starting point as described above, the rejection should be withdrawn.

In view of the foregoing, the rejection of claim 1 over Benayoun is believed overcome. The various rejections of claims 11-13, 15, 18, 19, 24, and 31-37 are also believed overcome for at least the reasons discussed.

The Applicants respectfully acknowledge the Examiner's indication of allowable subject matter in claims 2-10, 14, 16, 17, 20-23, and 25-30. However, in view of the foregoing, the Applicants believe these claims to be allowable in their current form without amendment.

In view of the foregoing, Applicants believe all claims now pending in this application are in condition for allowance. The issuance of a formal Notice of Allowance at an early date is respectfully requested. If the Examiner believes a telephone conference would expedite prosecution of this application, please telephone the undersigned at (510) 663-1100.

Respectfully submitted,
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